

## Patent Claims

1. A method for changing between a packet-oriented PTT session (PC) and a circuit-oriented telephone connection (TC) as selectable communication connections between at least one first connected radio communication appliance (UE1) and at least one second connected radio communication appliance (UE2) in a radio communication system (FC), where a first of these two communication connections (PC, TC) is selected and set up by at least one connected radio communication appliance (UE1) and/or by at least one control unit (PTTS1) in the radio network in the radio communication system (FC), and where a change is made from this first communication connection (PC), which has already been set up, to the second communication connection (TC) under the control of a radio communication appliance (UE1) which is connected to the first communication connection (PC) and/or under the control of that control unit (PTTS1) in the radio network in the radio communication system (FC) which is connected to the first communication connection (PC) by activating the second communication connection (TC) while the first communication connection (PC) still exists.

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2. The method as claimed in claim 1, characterized in that the first radio communication appliance (UE1) uses the first communication connection (PC), which has already been set up, to send the second radio communication appliance (UE2) at least one control signal (IS2) which is used to notify the second radio communication appliance (UE2) of the need for the first radio communication appliance (UE1) to change from the first communication connection (PC), which has already been set up, to the second communication connection (TC).

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3. The method as claimed in one of the preceding claims,

characterized

in that the first and/or the second radio communication  
5 appliance (UE1) connected to the first communication  
connection (PC), which has already been set up, sends  
that control unit (PTTS1) which is responsible for the  
first communication connection (PC), which has been set  
up, at least one control signal (IS2\*) which is used to  
10 notify this control unit (PTTS1) of the need for the  
first and/or the second radio communication appliance  
(UE1) to change from the first communication connection  
(PC) to the second communication connection (TC).

15 4. The method as claimed in one of the preceding claims,

characterized

in that the first and/or second radio communication  
appliance (UE1) connected to the first communication  
20 connection (PC), which has already been set up, sends  
that control unit (MSC1) which is responsible for the  
second communication connection (TC), which needs to be  
set up, at least one control signal (IS1) which is used  
to notify this control unit (MSC1) of the need for the  
25 first and/or the second radio communication appliance  
(UE1) to change from the first communication connection  
(PC) to the second communication connection (TC).

30 5. The method as claimed in one of the preceding claims,

characterized

in that the control unit (PTTS1) connected to the first  
communication connection (PC), which has already been  
set up, sends the control signal (SM1) relating to the  
35 need for the first and/or the second radio  
communication appliance (UE1) to change to that control  
unit (MSC1) which is responsible for activating and  
setting up the second communication connection (TC).

6. The method as claimed in one of claims 2 to 5,  
characterized  
in that the control signal (IS2) has inserted into it  
5 one or more address parameters (PN1, PN2) for that  
radio communication appliance (UE2), connected to the  
first communication connection, to which the need to  
change is directed and/or for that radio communication  
appliance (UE1), connected to the first communication  
10 connection, from which the need to change issues,  
and/or at least one identification parameter (P1) for  
distinguishing the first communication connection (PC),  
which has already been set up, for the second  
communication connection (TC), which needs to be set  
15 up.

7. The method as claimed in claim 6,  
characterized  
in that the identification parameter (P1) in the  
20 control signal (IS2) is used to associate the first  
communication connection (PC), which has already been  
set up, with the second communication connection (TC),  
which is yet to be set up, so that an explicit link is  
brought about between the first communication  
25 connection (PC), which has already been set up, and the  
required, second communication connection (TC).

8. The method as claimed in one of the preceding  
claims,  
30 characterized  
in that the first communication connection (PC), which  
has been set up, is cleared down and terminated after  
the second communication connection (TC) has been  
activated.

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9. The method as claimed in one of claims 1 to 7,  
characterized

in that, after it has been activated, the second communication connection (TC) is set up and maintained in parallel with the first communication connection (PC), which has already been set up.

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10. The method as claimed in one of the preceding claims,  
characterized

10 in that the control unit (PTTS1) used for the packet-oriented PTT session (PC) is a PTT server.

11. The method as claimed in one of the preceding claims,  
characterized

15 in that the control unit (MSC1) used for the circuit-oriented telephone connection (TC) is an MSC switching unit.

20 12. A radio communication appliance (UE1, UE2) having a control unit (ST1) for carrying out the method as claimed in one of claims 1 to 11.

25 13. A network component (PTTS1, MSC1) having a control unit (SVS) for carrying out the method as claimed in one of claims 1 to 11.

14. A radio communication system (FC) having a first group (G1) of network components for selecting and providing a packet-oriented PTT session (PC) and also  
30 having a second group (G2) of network components for selecting and providing a circuit-oriented telephone connection (TC) as selectable communication connections between at least one first connected radio communication appliance (UE1) and at least one second  
35 connected radio communication appliance (UE2) in a radio communication system (FC), the two groups of network components each having control means for

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carrying out the method as claimed in one of claims 1 to 11.